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Report of Five Cases of Laparotomy for Intestinal Obstruction.

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REPORT OF FIVE CASES OF LAPAROTOMY FOR INTESTINAL OBSTRUCTION.

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The importance of early exploration and early interference in abdominal disturbances in general, and in intestinal obstruction in particular, is too apparent to require any additional emphasis. These cases were taken from a number operated upon during the past fifteen months and reported here because of certain features of interest they possessed.

Although devices and clamps of one variety or another will always occupy a place in surgery, the tendency is, however, in the direction of the needle and thread as the true surgical method. When we are able to reach conveniently the seat of resection or anastomosis and the patient is not *in extremis*, the time saved does not compensate for the step backward in resorting to a device.

The opening and closing of the abdomen, the necessary examinations, together with the resection and anastomosis, required but fifty minutes in the first case.

What seems to be more necessary than either devices or clamps is a little more practice with a needle and thread, and an understanding of not one, but several methods of resection; and then, in all but a very limited number of cases, the operator will be able to get the most satisfactory results.

Case II is of interest as illustrating the slight degree of intussusception and the peculiar symptomatology of the case.

It is important to note the influence of the simplest nourishment upon the pains. Any food would provoke and maintain

peristalsis until disposed of. In this we have a practical hint that may be applied in the diagnosis and treatment of other intestinal disturbances. The pains followed the ingestion of food with such uniformity that the child abstained from food almost altogether until reduced to emaciation.

Halstead, of Chicago, ANNALS OF SURGERY, Vol. xxxv, referring to the statistics of Kelynack in which Meckel's diverticulum was present eighteen times in 1446 post-mortems. In 3400 examinations in St. Bartholomew's Hospital there were twenty-seven in which Meckel's diverticulum was found, making one in every 126 bodies. The same writer reviews Leichterstern's cases of intestinal obstruction numbering 1134. Thirty-nine per cent. were due to intussusception, 9 per cent. to bands and adhesions, and 6 per cent. to diverticula.

Of another series of cases collected by Haven, Duchanssoy and Brinton, making in all 991, in about 6 per cent. the obstruction was due to the Meckel's diverticulum.

Halstead believes that Meckel's diverticulum probably occupies a place next to intussusception as a cause of intestinal obstruction.

CASE I.—*Multiple Intestinal Strictures of Tubercular Origin; Intestinal Resection and Ileocolostomy; Recovery from Operation; Death later from General Tuberculosis.*—Mr. C., aged thirty-six years; occupation, farmer. Referred to me by Dr. S. T. Botts, of Glasgow. Family history revealed tuberculosis upon the maternal side. Personal history prior to present trouble, negative.

History of present trouble. About eighteen months previously the patient swallowed a pin. According to his version, it was arrested for a short time in the œsophagus. After a lapse of a number of days there appeared a pain in the region of the umbilicus. This persisted with varying degrees of intensity throughout the whole eighteen months. At times it amounted to no more than a sense of discomfort, and on several occasions, during part of the eighteen months, the pain was so excruciating as to require large doses of morphine. He referred to his trouble as being obstructive in character. He insisted that he could feel the arrest of the intestinal content at one point, and at a certain

time feel the obstruction relieving itself. This relief was usually hastened by the ingestion of certain digestive ferments.

In the last six months he lost some weight, but otherwise appeared healthy, and always led an active life. Examination of the abdomen was practically negative. Neither inspection, percussion, nor palpation yielded any information.

The patient was accompanied by his physician, who desired to be present at the operation, but was unable to remain in the city for any length of time, and, therefore, the usual opportunity for the observance of the case was lacking. The day before the operation as well as the day of the operation, his temperature ranged between 99¾° and 100° F.

An exploratory incision was proposed, reserving the right to deal with the condition as thought proper.

Upon opening the abdomen, the cæcum was represented by a mass almost twice the natural size and distinctly inflammatory in its appearance. Upon manipulation, the mass was rather dense and considerably thickened. The entire mass was firmly bound down, but no tubercles were apparent. Upon examination of the small intestine, two strictures were found at about the middle of the ileum. These occupied three-quarters of an inch of the intestine, and were located about six inches apart. These strictures represented an almost complete occlusion of the intestinal lumen.

To the touch it was apparent that quite a thickening of the intestinal wall had occurred, and upon inspection there appeared what seemed to be a few miliary tubercles close to the mesenteric border of the intestine. Careful inspection failed to disclose tubercles in any other portion of the abdominal cavity. From this, three points of obstruction were apparent,—the two strictures just named and the obstruction in the cæcal region. Careful examination of the cæcal mass determined the inadvisability of its removal. To overcome the cæcal obstruction, an ileocolostomy was performed by making a communication between the lower portion of the ileum and the colon just above the sigmoid flexure. The communication measured four inches in length. In making this communication, three successive rows of suture were employed. The condition of the patient being still favorable, the other strictures were overcome by means of a resection, performed after the method of Woelfler. This included both strictures, the

amount of intestinal tract removed being about eight inches. The time consumed in this operation was fifty minutes. The intestinal symptoms were relieved at once. The wound healed solidly excepting for a distance of about one inch at its lowest point. Although no distinct abscess occurred, the process was granular and of a glazed appearance, and yielded very stubbornly to epidermization.

The patient left the infirmary at the end of a month.

Although the obstructive symptoms had entirely disappeared, a slight fever persisted, and he failed to make any progress in regaining his strength. Three months later he died of a general tuberculosis. Post-mortem examination (for which I am indebted to Dr. Botts) revealed general tuberculosis of the abdominal cavity. The result of the intestinal operations was all that could be desired. Microscopic examinations of the resected specimen verified the tubercular nature of the trouble.

CASE II.—*Intussusception, Operation, Suture of Intestine; Recovery.*—Louis, aged six years. Referred to me by Dr. A. F. Beuren. Child presented the following history. Family history good. He had never been sick before. Was taken ill about a month previous. The onset of present illness was rather sudden, following soon after eating a large amount of dried fruit. Patient began to complain of severe abdominal pains, which at first were constant, but after a lapse of a few days became intermittent in character. He had been treated for weeks with various drugs, including opiates, bismuth, digestive ferments, and vermifuges.

When seen by me his condition was as follows: Extreme emaciation, temperature and pulse normal, no abdominal pain upon palpation, nor any tumor discernible. Pains occurring at varying intervals from half to several hours, and always precipitated and aggravated by taking any form of nourishment. Tendency to extreme constipation, but no distinct obstruction.

An exploratory incision revealed an inflammatory condition about the ileocæcal valve, which upon closer examination consisted of a considerably thickened ileum that was protruding into the cæcum for the extent of one inch.

The intussusception was reduced, the ileum incised, and the incision in the intestine closed by means of Lembert sutures. The child made an uninterrupted recovery, all symptoms disappearing.

CASE III.—*Obstruction from Meckel's Diverticulum.*—H. K., aged seventeen years. Referred to me by Dr. L. J. Herget. Family history good. When seen was suffering from acute appendicitis of forty-eight hours' duration. Operation was proposed and carried out. The appendix was found gangrenous but not ruptured. Its removal was carefully effected, and the stump buried by means of a double row of sutures. The patient made a rapid recovery. During the operative procedure, the cavity, as usual in such cases, was carefully protected, so that practically only the cæcum was exposed to manipulation. For this reason the presence of a Meckel's diverticulum was overlooked.

About a month after leaving the infirmary he secured an entrance to the pantry and devoured a number of apples. This exploit was rapidly followed with colicky pains, that became so severe that his family doctor was sent for, who administered opiates, with but temporary relief. When the effect of the opiates wore away, the pain reappeared in its former severity. When seen by me he was suffering from severe abdominal pains, which were referred to a point on a level with the umbilicus and almost one inch to the right. Temperature, 99° F.; pulse, 100; slight distention, but no tumor.

The patient was removed to the infirmary, and on the following morning, with the assistance of Dr. W. C. Dugan, an exploratory operation was carried out. At the time of the operation the temperature reached 100° F.; pulse, 112; pains still severe and considerable distention. Upon opening the abdomen, a few ounces of peritoneal fluid escaped, and distended loops of intestine bulged through the opening.

In following out the distended coil of intestine, an acute angulation was encountered that was occasioned by the adhesion of the Meckel's diverticulum to another loop of intestine.

The diverticulum was short and stubby in character, measuring about one inch in length and half an inch in diameter. The process was obliterated by folding it parallel with the bowel and then burying it with a row of sutures. The abdomen was closed. For two days following the operation, marked evidences of peritonitis persisted. On the third day the intestinal functions were re-established, and with this all evidences of peritoneal disturbances disappeared.

CASE IV.—*Intussusception due to a Lumbricoid.*—B., aged

five years. Family history good. Personal history good. Six days previous he suffered for two days from a disturbance that was diagnosed by his attending physician, Dr. Tompkins Botts, as an intestinal obstruction due to an intussusception. This attack lasted for two days. The child when seen by me had been suffering for about eight hours from its second attack. Its condition was as follows: Temperature, 99° F.; pulse, 120. Abdominal examination negative in character. The patient was in extreme pain, rolling and tossing about and vomiting a dark-colored fluid. The diagnosis of an intestinal obstruction was made and an immediate operation urged. The parents were wholly unprepared for such an advice, and insisted upon a delay, hoping that the next few hours might bring an improvement. Instead of this, the child grew steadily worse, the pains became more severe, the vomiting more frequent and stercoraceous in character. The pulse became rapid and feeble.

At midnight the parents consented to an operation, which was carried out as rapidly and carefully as the crude and imperfect conditions permitted. Dr. S. T. Botts administered the anæsthetic, and his son, Dr. Tompkins Botts, acted as my only assistant.

The abdomen was opened, and multiple intussusceptions revealed. Two of the intussusceptions represented a section of three or four inches of intestine. A third consisted of ten inches of intestine that had become invaginated. All these involved the ileum. The invaginations were readily reduced. Upon reducing the chief of these, a good-sized *lumbricoid* was felt and seen through the intestinal wall. The intestine was incised and the parasite removed. The intestinal opening was closed by means of Lembert suture. The abdomen closed. For the next six hours the relief from pain was complete, and the nausea was only that which ordinarily follows the administration of an anæsthetic. Towards the middle of the following day there was some return of pain; the vomiting increased, and at the close of the first day symptoms returned similar to those prior to the operation, but not of the same severity. The child died at the beginning of the third day.

CASE V.—*Obstruction due possibly to a Hernia into a Retroperitoneal Fossa.*—C. K., aged four years. Referred to me

by Dr. A. F. Beuren. Family history good. Personal history good.

The child had been perfectly well until five days previous. Onset sudden, consisting of severe abdominal pains. These were paroxysmal in character and varying in intensity. The occasional vomiting was of a clear mucus. Considerable tenesmus and watery evacuations mixed with a greenish coagula and a clear tenacious mucus, formed in character and not unlike a very thin tapeworm.

The abdominal inspection was negative in character. Palpation likewise yielded nothing. No tumor was visible, and there were no especial points of tenderness. Upon opening the abdomen, distended loops of intestines presented themselves. After a careful search about the cavity, the seat of the disturbance was located upon the right side of the cæcal region. The intestines in this region were crowded together but not adherent, although very much congested. After some manipulation, the cæcum was brought into view.

The age and condition of the child did not permit of as careful an investigation as one would desire. There was no invagination, nor could any volvulus be detected. No bands were observed. The cæcum, the beginning of the colon, and the lower end of the ileum seemed to be crowded upward and backward. With some traction the entire mass was brought into view. The appendix was in striking contrast with its surroundings, resembling a wax taper more than a vermiform appendix. The cæcum was slightly congested. The intestine was opened for a more careful examination of the condition with negative results. The appendix was removed and the stump buried by means of a row of sutures. By this time an hour and a quarter had elapsed, and the condition of the patient was such as to make all further efforts unadvisable.

The precise nature of the obstruction was not determined, but in the absence of any bands, invaginations, or volvuli, which is reasonably certain did not exist, it was suspected that in a child of this age the obstruction was due to a hernia into one of the retroperitoneal fossæ.

The patient was removed *in extremis,* and for a time its reaction was doubtful. All symptoms disappeared, however, and the recovery was uninterrupted.